

**R E M A R K S**

Reconsideration of this application, as amended, is respectfully requested.

**ALLOWABLE SUBJECT MATTER**

The Examiner's indication of the allowability of the subject matter of claims 2, 4, 5, 10 and 11 is respectfully acknowledged.

These claims, however, have not been rewritten in independent form at this time since, as set forth in detail hereinbelow, it is respectfully submitted that their respective parent claims also recite allowable subject matter.

**THE SPECIFICATION**

The specification has been amended to correct two minor informalities of which the undersigned has become aware, including the informality pointed out by the Examiner. No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered, and that the objection to the specification be withdrawn.

**THE DRAWINGS**

Fig. 3 has been amended to correct the spelling of "control" as required by the Examiner. Submitted herewith are a corrected sheet of formal drawings which incorporates the amendment and an

annotated sheet showing the changes made thereto. No new matter has been added, and it is respectfully requested that the Examiner's objection to the drawings be withdrawn.

THE PRIOR ART REJECTION

Claims 1, 3, 14 and 16 were rejected under 35 USC 102 as being anticipated by US 2002/0036669 ("Hosono et al"); claims 8, 15 and 17 were rejected under 35 USC 102 as being anticipated by US 2002/0167558 ("Kojima"); and claims 6, 7, 9, 12 and 13 were rejected under 35 USC 103 as being obvious in view of various combinations of Hosono et al, Kojima, US 2004/0080596 ("Taguchi et al"), US 2003/0189609 ("Ishikowa") and USP 6,398,331 ("Asaka et al"). These rejections, however, are respectfully traversed.

According to the present invention as recited in independent claim 1, an inkjet head inspecting method is provided which comprises: filling an inkjet head with inspecting ink; measuring a driving waveform the inkjet head shows; correcting the measured driving waveform based on a correlation formula, which is obtained beforehand based on image recording ink the inkjet head uses for image recording; and setting the inkjet head to have a driving waveform based on a result of correction.

Similarly, according to the present invention as recited in independent claim 14, an inkjet head is provided which comprises

a storage section which stores driving waveform information, wherein the driving waveform information is obtained by (i) measuring a driving waveform which the inkjet head filled with inspecting ink shows, (ii) correcting the measured waveform based on a correlation formula obtained beforehand based on image recording ink the inkjet head uses for image recording, and (iii) setting the inkjet head to have a corrected driving waveform based on a result of correction.

Thus, according to the present invention as recited in independent claims 1 and 14, a driving waveform of an inkjet head is first measured while the inkjet is filled with an inspecting ink. The measured waveform is then corrected based on a predetermined correlation formula for an ink to be used with the inkjet head. The driving waveform of the inkjet head can thus be set based on the type of ink to be used. Accordingly, the driving waveform can thereby be set that is based on the measured driving waveform of the inkjet head when filled with the inspecting ink and that varies depending upon the ink to be used.

By contrast, it is respectfully submitted that Hosono et al merely discloses measuring the weight of ejected ink droplets so as to determine the natural period  $T_c$  of the ink in the pressure chamber of the recording head. In Hosono et al, the weight of ink is measured to set a waveform rank, and it is respectfully submitted that Hosono et al does not disclose, teach or even

remotely suggest measuring a driving waveform with an inspecting ink and then correcting the measured driving waveform with a predetermined correlation to correct the driving waveform for use with an ink to be used for image recording, in the manner of the present invention as recited in claims 1 and 14.

In addition, it is respectfully pointed out that according to the present invention as recited in independent claim 8, an inkjet head inspecting method is provided which comprises: filling an inkjet head with inspecting ink; measuring a driving voltage the inkjet head shows; correcting the measured driving voltage based on a correlation formula, which is obtained beforehand based on image recording ink the inkjet head uses for image recording; and setting the inkjet head to have a driving voltage based on a result of correction.

That is, according to the present invention as recited in independent claim 8, a driving voltage of an inkjet head is first measured while the inkjet is filled with an inspecting ink. The measured voltage is then corrected based on a predetermined correlation formula for an ink to be used with the inkjet head. The driving voltage of the inkjet head can thus be set based on the type of ink to be used. Accordingly, the driving voltage can thereby be set that is based on the measured driving voltage of the inkjet head when filled with the inspecting ink and that varies depending upon the ink to be used.

It is respectfully submitted, by contrast, that Kojima merely discloses determining a driving voltage necessary to obtain a desired ejection speed value. Specifically, in Kojima, the driving voltage is determined based on a correlation between the necessary driving voltage, the nozzle diameter and the average capacitance of the print head unit.

It is respectfully submitted, therefore, that Kojima merely discloses a relationship between the desired ejection speed and the applied driving voltage. And it is respectfully submitted that Kojima does not disclose, teach or even remotely suggest measuring a driving voltage with an inspecting ink and then correcting the measured driving voltage with a predetermined correlation to correct the driving voltage for use with an ink to be used for image recording, in the manner of the present invention as recited in independent claim 8.

In view of the foregoing, it is respectfully submitted that each of independent claims 1, 8 and 14, as well as each of claims 2-7, 9-13 and 15-17 respectively depending therefrom, all clearly patentably distinguish over Hosono et al and Kojima, taken singly or in any combination with any of the prior art of record, under 35 USC 102 as well as under 35 USC 103.

\* \* \* \* \*

Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

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**Amendments to the Drawings:**

Fig. 3 has been amended to correct the spelling of "control"  
as required by the Examiner.

Attachment:     Annotated Sheet Showing Changes  
                  Replacement Sheet



FIG. 1

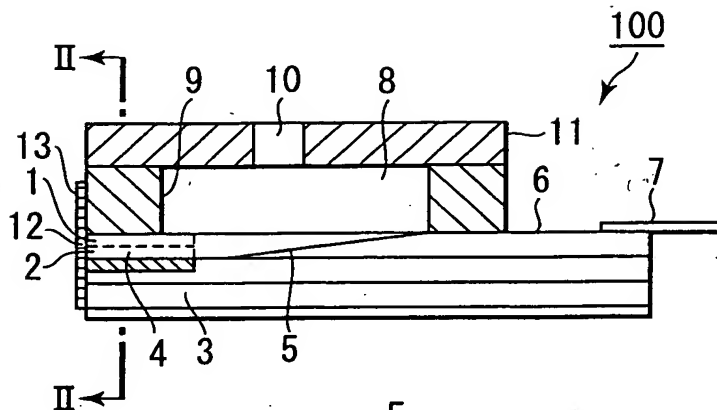


FIG. 2

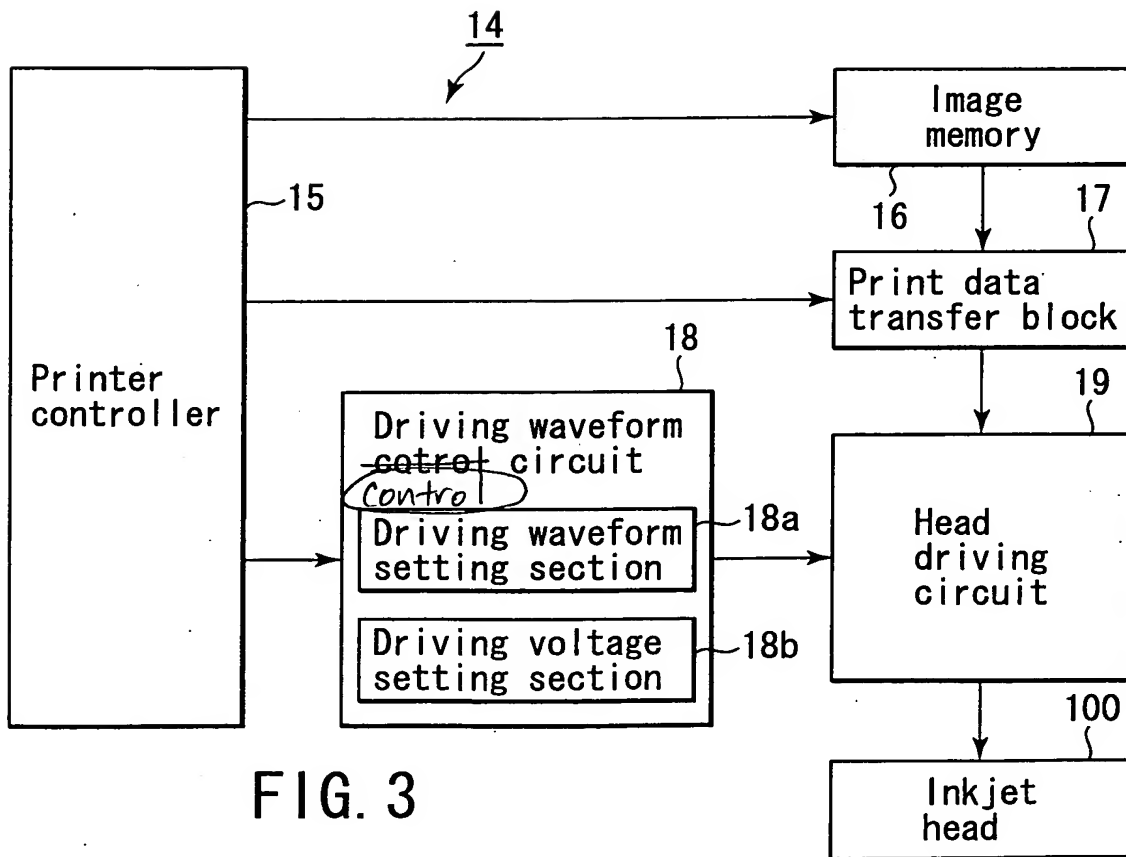
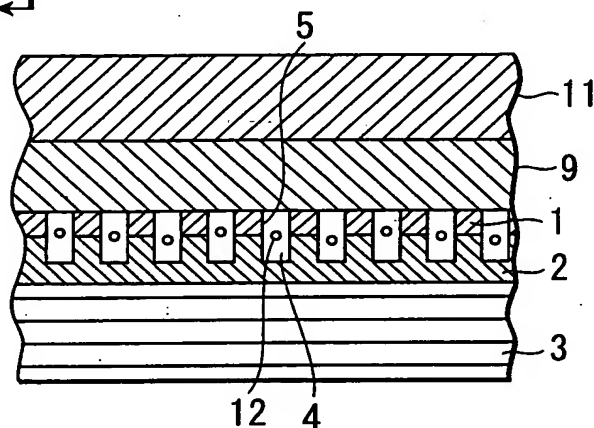


FIG. 3